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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,654	04/15/2004	Daisuke Moriwaki	NEC04P050-HSd	7708
21254	7590	01/05/2006	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,654

Applicant(s)

MORIWAKI ET AL.

Examiner

Andrew T. Sever

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 20-23 is/are rejected.
- 7) ☒ Claim(s) 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14 and 20-23 rejected under 35 U.S.C. 102(e) as being anticipated by Raskar et al. (US 6,834,965.)

Raskar teaches in figures 1 and 2a a system for correcting approximate expressions used in geometrical correction of projected images, said system comprising:

A projector (100), which operates under a control of a program;

Wherein said projector comprises means for performing a geometrical transformation on a projected image emitted from said projector in accordance with a shape of a projection surface of a screen, using a predetermined approximate expression to correct the projected image for distortion, and a value entered for substitution into at least one of a variable and a parameter to transform said predetermined approximate expression (figures 11 and 12 teach a method for warping the output images by a transfer function to correct the projected image for distortion due to the shape of the projection

surface, this is a predetermined method that would generate a predetermined approximate expression that would be used to correct the projected image during projection. The value is entered into the projector's processor (110) and is generated by a camera sub-system (160). See figure 11 which shows in step 1120 that value is generated (the quadric in 3d) which is used in step 1130 to determine transfer based on that value as is outlined in the rest of Raskar.)

With regards to applicant's claim 2:

See above, wherein input means is camera sub-system (160), calculating means is processor (110), image processing means is also in the processor (110) as well as projector sub-system (150) and optical output means (the projector lens that projector sub-system 150 projects through.)

With regards to applicant's claim 3:

A computer is a processor and accordingly the processor of the system of figure 1, can be considered a computer (the projector of figure 1 contains all of the components of a computer; processor, memory, i/o). Since it operates based on instructions stored in memory it inherently operates under the control of a program.

With regards to applicant's claims 4-9:

Raskar teaches in column 2 lines 25-27 and column 4 lines 58-66 that the projector is designed to project on such surfaces as a cylindrical surface (as claimed in applicant's

claims 4-6), domes, and room corners (as is claimed in applicant's claims 7-9.) Raskar teaches in column 5 lines 53-42 that a least square formula is used to determine the quadric equation appropriate to the particular surface(s) to be projected upon. (It should be noted that a least square formula would generate an equation for a parabola when applied to a parabolic screen.)

With regards to applicant's claim 10-12:

Raskar teaches in column 3 lines 4-11 that the projector of Raskar can project on any curved surface, which would include those that comprise a sinusoidal waved projection surface. Since as outlined in column 3 lines 6-11, Raskar develops a simplified parameterized transfer method which would include a quadric approximation of the surface an expression that is representative of a trigonometric function is therefore produced (note applicant does not claim that it is a trigonometric function only that it is representative of one and any curved surface can roughly be represented by a quadric function.)

With regards to applicant's claims 13, 14, and 20:

See above the projector of Raskar includes a processor (a calculator), which performs a geometrical transformation (which a parabola) of a projected image based on a received value from the camera subsystem.

Art Unit: 2851

With regards to applicant's claim 21:

Raskar as outlined above teaches a method of projecting an image, which includes receiving a value to be used for substitution into at least one of a variable, and a parameter for correcting (perfecting) an approximate expression used in geometrical correction of the projection image.

With regards to applicant's claim 22:

The value is inputted via an input device (camera) located on a component of said projection system (it is inside the casing.)

With regards to applicant's claim 23:

See above.

Allowable Subject Matter

3. Claims 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2851

4. The following is a statement of reasons for the indication of allowable subject matter:

As correctly noted by the applicant in applicant's arguments it would not be obvious to replace the automatic value generating system of Raskar with a manual human based system as is claimed since the human based system is not as usefull. Accordingly claims 15-19 are objected as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 10/25/2005 have been fully considered but they are not persuasive.

Applicant's primary argument is that Raskar teaches an automatic value generating means as opposed to applicant's specified user input means. First it should be noted that applicant does not claim a user input means until the new claims 15-19 which are indicated as being potentially allowable above. Second applicant's invocation of 35 U.S.C. §112 6th to provide this limitation to independent claims 1 and 3, is incorrect. The means plus function of claims 1 and 3 are a means for performing a geometrical transformation on a projected image. The means for providing the value for that transformation is not claimed in these claims and would not be considered part of the means for performing a geometrical transformation by one of ordinary skill in the art at the time the invention was made.

With regards to it being claimed in claim 2, MPEP 2111 [R-3] states that claims must be given their broadest reasonable interpretation consistent with the specification (see *In re Hyatt* 54 USPQ2d 1664, 1667 (Fed Cir 2000)). The only alternative is if the words of the claim are clearly defined in the specification (MPEP 2111.01). In the present case applicant is directed to their specification on page 6 which states "Projector 2 or computer 4 comprises simple input means 5." Note that this does not state that input means is defined for purposes of claim interpretation as a user input device. It does give an example (after saying the projector or computer comprises of simple input means, the specification states "for example") of a user input device, but that does not limit the claim language/invention (or specified invention) to only a user input device. Accordingly since applicant's own specification does not preclude an automatic input device such as that taught by Raskar, the rejection has been repeated (with modifications to reflect applicant's new claim language) and made final. With regards to claim 4-9 a small error in the characterization of Raskar's formulas (namely that a least square fits develops a linear equation instead of polynomial) has been corrected. Raskar's method would develop at least a binomial (which is a parabola). With regards to applicant's claim 10-12, the office is not invoking official notice as the rejection is a 35 U.S.C. § 102 (e) rejection and not a 35 U.S.C. § 103 rejection, it is inherent that Raskar's method could handle a sinusoidal screen (its irrelevant whether it was pre-conceived that it would be doing so), since Raskar is taught to be able to handle any curved surface which is a quadric which would include at least part of a sinusoidal screen (a sinusoidal wave can be characterize as a series of quadrics stitched together and would generate a transform

Art Unit: 2851

correcting for such a surface (it is irrelevant about the quality of said transform all the claim language requires it that it develops one.)

Since the rejection's have remained the same other then changes for clarity or reflecting applicant's amendments, all rejections are made final.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "W B Perkey", with a stylized flourish at the end.

AS

William Perkey
Primary Examiner